



ILKAP (m): 293T Lysate: sc-121053

BACKGROUND

ILKAP (integrin-linked kinase-associated serine/threonine phosphatase 2C), also known as PP2C δ , is a 392 amino acid cytoplasmic protein phosphatase that selectively interacts with integrin linked kinase (ILK) to regulate growth factor signaling and cell adhesion. While widely expressed, ILKAP is found at highest levels in striated muscle with lower levels found in smooth muscle. ILKAP belongs to the PP2C family and contains one PP2C-like domain. ILKAP has been suggested to inhibit oncogenic transformation and the ILK-GSK3 β signaling axis, and can bind 2 magnesium or manganese ions per subunit as cofactors. The gene encoding ILKAP maps to human chromosome 2, which consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome.

REFERENCES

1. Tong, Y., Quirion, R. and Shen, S.H. 1998. Cloning and characterization of a novel mammalian PP2C isozyme. *J. Biol. Chem.* 273: 35282-35290.
2. Leung-Hageteijn, C., Mahendra, A., Naruszewicz, I. and Hannigan, G.E. 2001. Modulation of integrin signal transduction by ILKAP, a protein phosphatase 2C associating with the integrin-linked kinase, ILK1. *EMBO J.* 20: 2160-2170.
3. Kumar, A.S., Naruszewicz, I., Wang, P., Leung-Hageteijn, C. and Hannigan, G.E. 2004. ILKAP regulates ILK signaling and inhibits anchorage-independent growth. *Oncogene* 23: 3454-3461.
4. Tamura, S., Toriumi, S., Saito, J., Awano, K., Kudo, T.A. and Kobayashi, T. 2006. PP2C family members play key roles in regulation of cell survival and apoptosis. *Cancer Sci.* 97: 563-567.
5. Lammers, T. and Lavi, S. 2007. Role of type 2C protein phosphatases in growth regulation and in cellular stress signaling. *Crit. Rev. Biochem. Mol. Biol.* 42: 437-461.
6. Nakrieko, K.A., Vespa, A., Mason, D., Irvine, T.S., D'Souza, S.J. and Dagnino, L. 2008. Modulation of integrin-linked kinase nucleo-cytoplasmic shuttling by ILKAP and CRM1. *Cell Cycle* 7: 2157-2166.
7. Pridgeon, J.W., Webber, E.A., Sha, D., Li, L. and Chin, L.S. 2009. Proteomic analysis reveals Hrs ubiquitin-interacting motif-mediated ubiquitin signaling in multiple cellular processes. *FEBS J.* 276: 118-131.

CHROMOSOMAL LOCATION

Genetic locus: Ilkap (mouse) mapping to 1 D.

PRODUCT

ILKAP (m): 293T Lysate represents a lysate of mouse ILKAP transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ILKAP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ILKAP antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.